



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

MA

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/510,116 02/22/00 MINERVINI

A 804RP746

JEFFREY R. GARGANO  
WALLENSTEIN & WAGNER LTD  
311 SOUTH WACKER DRIVE  
53RD FLOOR  
CHICAGO IL 60606-6622

MMC2/0124

EXAMINER
----------

EASTHOM, K	
ART UNIT	PAPER NUMBER

2832  
DATE MAILED:

01/24/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/510,116

Applicant(s)

MINERVINI ET AL.

Examiner

Karl D Easthom

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 33-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 & 32 is/are rejected.
- 7) ☒ Claim(s) 30 and 31 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 18) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

Art Unit: 2832

1. Applicant's election without traverse of claims 1-32 in Paper No. 9 is acknowledged.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-10 and 14-15 are rejected under 35 U.S.C. 102(e) as being anticipated by McGuire . McGuire discloses the claimed invention at Fig. 10 with PTC layer 20 and insulating g layers 120, and electrodes 100 thereon. For claims 7-8, any ceramic, dielectric or other material is disclosed at the top of col. 8, and where copper is disclosed for the electrodes at col. 5, lines 5-12, the insulating layer is deemed a copper clad PC board since it can be used as a PC board and no other printed circuits are on same.

4. Claims 1- 5, 9-16 , 19-20, 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Niihara ((JP 9-69416 cited by app.). The claimed invention is disclosed at Fig. 2 where the outer and central PTC layers 5 are the substrates of the claims, and the PTC layers are the second and fourth layers of the claim. The plural layers of the claim 14 end terminations and foil electrodes of claim 13 are disclosed at paragraph 13 of the translation. et al

Art Unit: 2832

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-6, 8-20, 22-29, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. in view of Niihara (JP 6-69416). Sasaki et al. discloses the claimed invention at Fig. 1 or 2 except forming the multilayer device of polymer. Niihara discloses that polymer PTC resistors are useful for replacing ceramic thermistors such as that of Niihara at par. 16 in order to form a reduced size. Element 15 of Sasaki et al. comprise the insulating layers. In claim 26, Sasaki discloses that any number of layers can be selected at col. 5, lines 18-25. In claim 15, it would have been obvious to replace the electrodes with foil for forming a good bond to the polymer, both disclosed in Niihara and suggested thereat for that purpose. In claim 22, tin is disclosed at col. 6 for the terminals 22.

7. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. or Niihara in view of McGuire et al. Sasaki et al. or Niihara discloses the claimed invention as noted above except forming the device of polymer (as to Sasaki only) and the terminal of copper. McGuire suggests polymer PTC resistors are useful for replacing ceramic PTC resistors at col. 1 with copper is a good electrode for same see col. 5, lines 1-12, such that it would have been obvious to replace the materials of Sasaki et al. or Niihara for the reasons noted.


Art Unit: 2832

8. Claims 30-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D Easthom whose telephone number is 703 308-3306. The examiner can normally be reached on M-Th, 5:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Gellner can be reached on 703 308-1721. The fax phone numbers for the organization where this application or proceeding is assigned are 703 308-7722 for regular communications and 703 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0956.

  
Karl D Easthom  
Primary Examiner  
Art Unit 2832

KDE  
January 22, 2001